

# Vaccinate Adolescents: Think 1–2–3!

Recommended vaccinations for adolescents have undergone a growth spurt over the past decade. Prior to 2005, the adolescent vaccination schedule was limited to catching up on missed doses of childhood vaccinations (eg, measles-mumps-rubella and hepatitis B) and administering vaccines recommended for high-risk individuals only (such as pneumococcal and hepatitis A vaccines).

That scenario has changed dramatically. Today 4 vaccines are routinely recommended for adolescents by the Advisory Committee on Immunization Practices:

- **Tetanus, diphtheria, and acellular pertussis (Tdap).** A single dose of Tdap vaccine, in lieu of a dose of tetanus and diphtheria toxoids (Td) vaccine, was recommended for adolescents at 11–12 years of age in 2006.
- **Meningococcal conjugate vaccine (MCV4).**\* A single dose was first recommended in 2005, beginning at 11–12 years of age. The recommendation was expanded in 2007 to include all adolescents 11–18 years of age. In 2010, a second or booster dose was recommended for all adolescents at 16 years of age, to strengthen protection during a period of increased risk from the mid-teens into the early 20s.  
\* **MCV4** – (Meningococcal conjugate vaccine 4-valent or Meningococcal ACWY vaccine) helps protect against meningococcal disease resulting from infection with serogroups A, C, W, or Y.
- **Human papillomavirus vaccine (HPV).** HPV was first recommended in 2007 for females at 11–12 years of age (starting as early as 9 years of age and continuing through 26 years of age). A permissive recommendation for HPV vaccine was first issued for young males in 2009, followed by a routine recommendation for 11-12-year-old males in 2011 (starting as early as 9 years of age and continuing through 21 years of age).
- **Influenza:** In 2008, the pediatric recommendation for annual seasonal influenza vaccination was expanded to include all persons 6 months through 18 years of age. Previously, only adolescents with certain high-risk medical conditions were recommended to receive annual flu vaccine.

## Think 1–2–3

One way to remember the adolescent vaccination schedule is to think 1–2–3: 1 dose of Tdap, 2 of meningococcal vaccine (at 11–12 years and at 16 years of age), and 3 doses of HPV (with 1 dose at 11–12 years of age followed by 2 more doses over a 24-week period). And influenza vaccine is easy to remember, too. It's given every fall. Success in delivering these recommended vaccines has been mixed, however.

Coverage among adolescents 13–17 years age reached levels of 86% for a single dose of Tdap vaccine and 78% for a single dose of MCV4 in 2013. But coverage for a second or booster dose of meningococcal vaccine lags far behind. More than 70% of those eligible for a second dose at age 16 had not received it by age 17.<sup>1</sup>

Vaccination rates for HPV vaccine in the 13-17-year age group vary widely for receipt of at least 1 dose (57% for females, 35% for males), with many fewer receiving the complete 3-dose series (38% of females, 14% of males).<sup>1</sup>

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For influenza, fewer than half (46%) of adolescents 13–17 years of age were vaccinated in the 2013–2014 season, while coverage rates for other pediatric age groups ranged from 61% (5–12 years of age) to 74% (6–23 months of age).<sup>2</sup>

This information and other materials in the MCV4 Toolkit are designed to help close the gap, as well as enable clinicians to do a more efficient and effective job of vaccinating adolescents in their care with all recommended vaccines. Key steps include:

- Educating parents and patients about the risks posed by vaccine-preventable diseases and the importance of timely and thorough adolescent immunization
- Giving a strong, unequivocal recommendation for indicated vaccines
- Capturing opportunities to immunize at any and all types of adolescent patient visits
- Improving record keeping so that patients who are due for vaccinations are readily identified and their immunizations documented
- Creating a pro-immunization culture and mindset among everyone on staff
- Tracking your immunization rates and developing strategies to improve them.

Opportunities for adolescent immunization are often missed, even during preventive-care visits.<sup>3</sup> Be sure to assess immunization status and consider vaccination at every visit. A strong recommendation for vaccination can help reduce missed opportunities and improve coverage.

Routinely Recommended Adolescent Vaccinations			
Vaccine	11–12 years	13–15 years	16–18 years
Tetanus, diphtheria, and acellular pertussis (Tdap) in place of a Td booster	1 dose	Catch-up if not already vaccinated	Catch-up if not already vaccinated
Meningococcal (MCV4)	1st dose	Catch-up if not already vaccinated	2nd dose (age 16)
Human papillomavirus (HPV)	3-dose series	Catch-up if not already vaccinated	Catch-up if not already vaccinated
Influenza	Annual	Annual	Annual

For the complete schedule, go to [www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-schedule.pdf](http://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-schedule.pdf).

**References:**

1. Centers for Disease Control and Prevention (CDC). National, regional, state and selected local area vaccination coverage among adolescents aged 13-17 years—United States, 2013. *MMWR*. 2014;63(29):625-633.
2. CDC. Flu vaccination coverage, United States, 2013-14 influenza season. [www.cdc.gov/flu/fluview/coverage-1314estimates.htm](http://www.cdc.gov/flu/fluview/coverage-1314estimates.htm). Accessed May 19, 2015.
3. Wong CA, Taylor JA, Wright JA, et al. Missed opportunities for adolescent vaccination, 2006-2011. *J Adolesc Health*. 2013;53(4):492-497.